What is claimed is:

1. A calorimeter comprising:

a body configured to admit and capture radiation, the body being further configured to absorb energy from the captured radiation;

a temperature sensor attached in thermal communication to the body, the temperature sensor being configured to detect a change in temperature of a substantial portion of the body responsive to absorption of the captured radiation; and

a cooling system configured to cool the body from temperatures elevated responsive to absorption of the captured radiation.

2. The calorimeter of Claim 1, wherein the temperature sensor includes wire having resistance that varies with temperature, the wire being attached in thermal communication with the body.

3. The calorimeter of Claim 2, wherein the wire includes enamel coated copper wire.

4. The calorimeter of Claim 2, further comprising a detector configured to detect resistance of the wire.

5. The calorimeter of Claim 4, wherein the detector includes a digital multimeter.

6. The calorimeter of Claim 4, further comprising a processor including a first component configured to convert detected resistance of the wire to temperature of the body.

7. The calorimeter of Claim 6, wherein the processor further includes a second component configured to convert the temperature of the body to power of the admitted radiation.

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8. The calorimeter of Claim 7, wherein the second component is further configured to correlate the temperature of the body to energy of the radiation absorbed in the body and to divide over time the energy of the radiation to determine the power of the radiation.

9. The calorimeter of Claim 1, wherein the temperature sensor further includes a plurality of thermocouples in thermal communication with the body.

10. The calorimeter of Claim 1, wherein the cooling system is non-aqueous.

11. The calorimeter of Claim 10, wherein the non-aqueous cooling system includes a gaseous cooling system including a plurality of channels defined in thermal communication within an interior of the body, the plurality of channels being connectable to a source of cooling gas.

12. The calorimeter of Claim 11, wherein the cooling gas includes gaseous nitrogen.

13. The calorimeter of Claim 1, wherein the cooling system is aqueous.

14. The calorimeter of Claim 1, further comprising a plurality of electrical heaters configured to introduce a predetermined amount of energy into the body for calibrating thermal capacitance of the body.

15. A calorimeter comprising:

a body configured to admit and capture radiation, the body being further configured to absorb energy from the captured radiation;

a wire having resistance that varies with temperature, the wire being attached in thermal communication with a substantial portion of the body;

a multimeter coupled to detect resistance of the wire;

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a processor coupled to receive detected resistance of the wire, the processor having a first component configured to convert detected resistance of the wire to temperature of the body; and

a cooling system configured to cool the body from temperatures elevated responsive to absorption of the captured radiation.

16. The calorimeter of Claim 15, wherein the processor further includes a second component configured to convert the temperature of the body to power of the admitted radiation.

17. The calorimeter of Claim 16, wherein the second component is further configured to correlate the temperature of the body to energy of the radiation absorbed in the body and to divide over time the energy of the radiation to determine the power of the radiation.

18. The calorimeter of Claim 15, wherein the temperature sensor further includes a plurality of thermocouples in thermal communication with the body.

19. The calorimeter of Claim 15, wherein the cooling system is non-aqueous.

20. The calorimeter of Claim 19, wherein the non-aqueous cooling system includes a gaseous cooling system including a plurality of channels defined in thermal connection within an interior of the body.

21. The calorimeter of Claim 20, wherein cooling gas includes gaseous nitrogen.

22. The calorimeter of Claim 15, wherein the cooling system is aqueous.

23. The calorimeter of Claim 15, wherein the multimeter includes a digital multimeter.

24. The calorimeter of Claim 15, wherein the wire includes enamel coated copper wire.

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25. The calorimeter of Claim 15, further comprising a plurality of electrical heaters configured to introduce a predetermined amount of energy into the body for calibrating thermal capacitance of the body.

26. A calorimeter comprising:

a body configured to admit and capture radiation, the body being further configured to absorb energy from the captured radiation;

a temperature sensor attached in thermal communication with the body, the temperature sensor being configured to detect a change in temperature of a substantial portion of the body responsive to absorption of the captured radiation; and

a cooling system configured to cool the body from temperatures elevated responsive to absorption of the captured radiation, the cooling system including a plurality of channels defined in thermal communication within an interior of the body, the plurality of channels being connectable to a source of cooling fluid.

27. The calorimeter of Claim 26, wherein the cooling system is non-aqueous.

28. The calorimeter of Claim 27, wherein the cooling fluid includes an inert gas.

29. The calorimeter of Claim 28, wherein the inert gas includes gaseous nitrogen.

30. The calorimeter of Claim 26, wherein the cooling system is aqueous.

31. A method of determining an amount of energy in a beam of radiation, the method comprising:

admitting a beam of radiation into a body;

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absorbing in the body at least a portion of the admitted radiation;

detecting a change in temperature of the body with wire having resistance that varies with temperature; and

cooling the body.

32. The method of Claim 31, wherein cooling is performed after completion of admitting the beam of radiation.

33. The method of Claim 31, wherein cooling is performed with a non-aqueous cooling system.

34. The method of Claim 33, wherein cooling the body includes pumping inert cooling gas through a plurality of channels defined within the body.

35. The method of Claim 34, wherein the inert cooling gas includes gaseous nitrogen.

36. The method of Claim 31, wherein cooling is performed with an aqueous cooling system.

37. The method of Claim 31, wherein detecting the change in temperature includes detecting resistance of the wire and correlating resistance of the wire to the temperature.

38. The method of Claim 31, further comprising correlating the change in temperature of the body with energy of the radiation absorbed in the body.

39. The method of Claim 38, further comprising dividing over time the energy of the radiation to determine power of the radiation.

40. The method of Claim 31, further comprising determining when the body reaches thermal equilibrium.

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41. The method of Claim 40, wherein reaching thermal equilibrium is determined with a plurality of thermocouples in thermal communication with the body.

42. The method of Claim 31, further comprising calibrating thermal capacitance of the body.

43. The method of Claim 42, wherein calibrating includes heating the body to a predetermined temperature.

44. The method of Claim 43, wherein heating is performed with a plurality of electrical heaters.

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